

AN ENUMERATION OF THE WOODY PLANTS OF CANTIPLA FOREST FRAGMENTS, CEBU ISLAND, PHILIPPINES

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ABSTRACT

Woody plants in Cantipla forest fragments, Barangay Tabunan, Cebu Island, Philippines, were inventoried from three 200 m² plots. A total of 45 species were recorded representing 37 genera of 26 families. The most represented families were Euphorbiaceae (5 species) followed by Moraceae (4 species) and Rubiaceae (4 species) while the most represented genus was *Ficus* (4 species). The fragmented forest is also a habitat of the critically endangered *Cinnamomum cebuense* Kost. (Lauraceae), locally known as *kalingag*. The flora of the Cantipla forest fragments is typical of a lowland rainforest vegetation. There is an urgent need to examine and analyze the dynamics of this important ecological heritage and biodiversity corridor so that appropriate forest and environmental management strategies by the local government and the community will be identified and implemented.

Keywords: floristic composition, tropical mountain, lowland forest, Cebu watershed, Cantipla forest, *Cinnamomum cebuense*

INTRODUCTION

The Cantipla forest clusters were once a continuous forest cover which is part of the Central Cebu National Park (CCNP) and the Kotkot-Lusaran Watershed. Despite the fact that they were part of the CCNP since 1937, they did not escape exploitation by the local people. When Colina & Jumalon (1974) made its first botanical survey in May 1970 , the majority of the dipterocarp forest had already been destroyed. The destruction intensified due to the rampant practice of swidden agriculture. This contributed greatly to the reduction of forested area in Cebu to about 0.3% of the original forest cover (SSC, 1988) which is mostly confined to rocky limestone cliffs.

These forest fragments are also part of the Central Cebu biodiversity corridor identified by the Philippines Biodiversity Conversion Priority-setting Program (PBCPP) (Ong et al., 2002). Despite this status, there is still no exhaustive inventory of plants in the area except for a generic enumeration by

Colina and Jumalon (1974) in which they listed 60 genera. There is, therefore, a need to catalog the species in the Cantipla forest fragments. The present study serves as baseline information for future development of forest conservation and management strategies in the area.

This paper aims to produce a checklist of woody plants in the Cantipla forest fragments in Sitio Cantipla, Barangay Tabunan, Cebu Island, Philippines.

METHODOLOGY

Study Area

The Cantipla forest fragments are located in the central part of Cebu, in Barangay Tabunan, Cebu City, Philippines (Figure 1). It is part of the Central Cebu National Park (CCNP), an 11,893-hectare reserve area, and the Kotkot-Lusaran Watershed Forest Reserve.

It belongs to the Type III climate according to the Coronas Classification, i.e., it has no pronounced maximum rain period and with a short dry season lasting from one to three months.

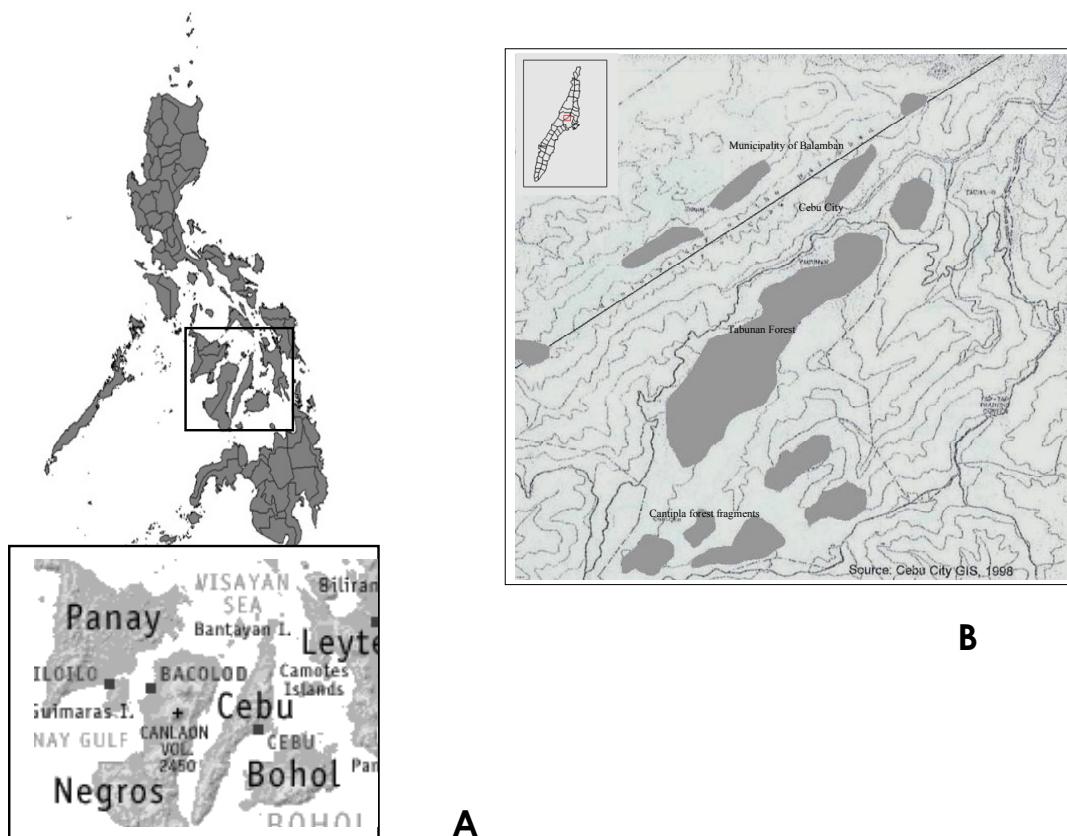


Figure 1. Map of the study area. **A.** Location of Cebu Island in the Philippines. **B.** Location of Cantipla forest fragments in Central Cebu (Cebu City GIS, 1998). Inset: Cebu Island.

It has a rugged terrain with elevations ranging from 400 to 850 masl. The soil in the area is classified as Baguio clay loam characterized by a dark brown to brown surface soil with a depth of 20 to 30 cm that is fairly rich in organic matter (Barrera *et.al.*, 1954). The surface soil is thicker at the lower part of the slopes than on the top. It has a medium-coarse granular structure which is desirable for plowing (Barrera *et.al.*, 1954). It is no wonder why there is considerable agricultural activity in this area. The bed rocks are of igneous and metamorphic origin (Colina and Jumalon, 1974).

Establishment of the Sampling Sites and Inventory

Permission to conduct this study in the Cantipla forest fragments was sought from the Central Cebu Protected Landscape management under the Protected Areas and Wildlife Bureau of the Department of Environment and Natural Resources prior to the establishment of study plots and inventory proper. Three 200 m² quadrats were established in the Cantipla forest fragments at elevations ranging from 674 to 764 masl. All woody plants inside the quadrat were identified. Samples were collected from species that were not identified in the field. These were then brought to the University of the Philippines Los Baños for identification at the College of Forestry and Natural Resources.

RESULTS AND DISCUSSION

Forty-five woody species, representing 37 genera and 26 families were found in the Cantipla forest fragments (Table 1). The most represented families were Euphorbiaceae (5 species), Moraceae (4 species) and Rubiaceae (4 species) while *Ficus* was the most represented genus (4 species). The remnant flora suggests a typical lowland rainforest vegetation. Almost all of the surveyed species were native. The presence of exotic tree species, *Acacia mangium* and *Cassia spectabilis*, and pioneer tree species like *Ficus spp.* suggested disturbance. In fact, the surrounding area is subjected to extensive agricultural activities (Figure 2). Planting of crops in between fragments was evident. Portions of the area were also claimed and being landscaped by private owners. These activities resulted to further reduction and fragmentation of the forested area endangering this ecological heritage. One of the most endangered species considered to be facing an extremely high risk of extinction in the wild is the Cebu endemic *Cinnamomum cebuense* Kosterm. (Lauraceae), locally known as *kalingag* (Buot, 1995). It is officially listed as critically endangered by the Department of Environment and Natural Resources (DENR, 2007).

Table 1. List of woody plant species found in Cantipla forest fragments in Sitio Cantipla, Barangay Tabunan, Cebu Island, Philippines.

FAMILY / SPECIES	OFFICIAL COMMON NAME <i>as listed in the Lexicon of Philippine Trees by Salvosa (1963)</i>
ANNONACEAE <i>Orophea dolichocarpa</i> Merr.	Amunat-haba
ARALIACEAE <i>Osmoxylon serratifolium</i> (Elmer) Philipson <i>Schefflera</i> sp.	-
BURSERACEAE <i>Canarium hirsutum</i> Willd.	Milipili
CELASTRACEAE <i>Glyptopetalum euonymoides</i> Merr.	Sangki-sangki
COMBRETACEAE <i>Terminalia calamansanai</i> (Blanco) Rolfe	Malakalumpit
DILLENIACEAE <i>Dillenia pteropoda</i> (Miq.) Hoogland	Kambug
DIPTEROCARPACEAE <i>Shorea malibato</i> Foxw.	Yakal-malibato
ELAEOCARPACEAE <i>Elaeocarpus fulvus</i> Elmer <i>Elaeocarpus nitidulus</i> R. Knuth	Lanauting-dilau Tabian-sikat
EUPHORBIACEAE <i>Drypetes globosa</i> (Merr.) Pax & K. Hoffm. <i>Glochidion philippicum</i> (Cav.) C.B. Rob. <i>Macaranga hispida</i> (Blume) Müll.Arg. <i>Neoscortechinia arborea</i> (Elmer) Pax & K.Hoffm. <i>Neoscortechinia parvifolia</i> (Merr.) Merr.	Kalugkugan Iba-ibaan Lagapak Magong Magon-liitan
FABACEAE <i>Acacia mangium</i> Willd. <i>Cassia spectabilis</i> L.	Mangium Antsoan-dilau
ICACINACEAE <i>Stemonurus gitingensis</i> (Elmer) Sleumer	-
JUGLANDACEAE <i>Engelhardia spicata</i> Blume	Lupisan

LAURACEAE	
<i>Cinnamomum cebuense</i> Kosterm.	Kaningag, Kalingag
<i>Neolitsea paucinervia</i> Merr.	Bohian-ilanan
MAGNOLIACEAE	-
<i>Magnolia candolii</i> (Blume) H. Keng	
MELASTOMATACEAE	
<i>Astronia lagunensis</i> Merr.	Dungau-bundok
MORACEAE	
<i>Ficus annulata</i> Blume	Sininsing
<i>Ficus congesta</i> Roxb.	Malatibig
<i>Ficus sp. 1</i>	
<i>Ficus sp. 2</i>	
MYRISTICACEAE	
<i>Myristica umbellata</i> Elmer	Duguan-pinayong
MYRSINACEAE	
<i>Discocalyx euphlebia</i> Merr.	Dikai-dikaian
MYRTACEAE	
<i>Syzygium caudatifolium</i> (Merr.) Merr.	Taguhangin
<i>Syzygium trianthum</i> (Merr.) Merr.	Tubal
RUBIACEAE	
<i>Atractocarpus obscurinervius</i> (Merr.) Puttock	Kalanigi
<i>Canthium ellipticum</i> (Merr.) Merr.	Potot
<i>Dolicholobium philippinense</i> Treteuse	-
<i>Tarennia loheri</i> (Merr.) Bremek.	Loher gusokan
RUTACEAE	
<i>Melicope nitida</i> Merr.	Salimutbut
<i>Micromelum compressum</i> (Blanco) Merr.	Tulibas-tilos
SAPOTACEAE	
<i>Mimusops parvifolia</i> R. Br.	Bansalagin
<i>Palaquium elliptilimbum</i> Merr.	Alakaak-tilos
<i>Palaquium gigantifolium</i> Merr.	Alakaak
THEACEAE	
<i>Adinandra nigro-punctata</i> Merr.	Sangnauan-itim
TILIACEAE	
<i>Grewia serrata</i> Blanco	Danglin-lagari
URTICACEAE	
<i>Dendrocnide sp.</i>	

VERBENACEAE

Premna congesta Merr.
Premna membranifolia Merr.

Alakaag
Agbau



Figure 2. A. Portion of the Cantipla forest. Notice the agricultural clearing. B. A typical agricultural area in the site. Photos by G.O. Cadiz.

RECOMMENDATION

There is a need to examine the potential economic values of these biodiversity in the Cantipla forest fragments together with the patterns of exploitation by the local people for the immediate development of appropriate forest management and conservation strategy in order to sustain this valuable

resource. Community biodiversity education should be encouraged among the locals to enhance responsible utilization of this vital forest remnant.

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